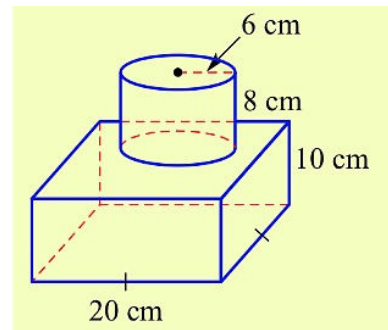


Test Outline – Geometry Chapter Test – Surface Area and Volume – 11 Essentials

1. Find surface area and volume using the appropriate formula of: **rectangular prism, cube, triangular prism, cylinder, square-based pyramid, cone, sphere**
2. Find surface area of only **part** of the 3D shapes in #1 (examples: label only of a cylindrical can – not the two circles of the can; hemisphere, cone without lid, etc.) (assignment – surface area application; booklets: surface area p. 43, volume p. 10)
3. Find volume of only **part** of the 3D shapes in #1 (examples: hemisphere, rectangular prism with square hole punched through it) (booklets: surface area p. 42, 43 volume p. 11, 12)
4. In a real life situation know whether to find the answer with surface area or volume. (example – painting or wrapping the outside → surface area; how much water or substance fits inside → volume) (booklets – surface area p. 35, volume p. 12)
5. Given the surface area or volume and some of the dimensions, **find the missing dimension**. (surface area application assignment; booklets: surface area p. 42, volume p. 12)

6. Find the volume or surface area of a **composite figure** (two figures glued together). Remember – for surface area – you need to subtract the overlap: the part of the one figure that is not part of the surface because it's glued; and the part of the other figure that is covered by the first figure – ie **subtract the area twice**. (assignment – surface area application; booklets: surface area p. 39-41, p.12, 15)

Example: the composite object below is a cylinder glued to a rectangular prism. The bottom of the cylinder (a circle) is not part surface of the cylinder so it needs to be subtracted from surface entire cylinder. Also the top of the prism has the circle of the cylinder glued to it. So the surface of the top of the prism is a rectangular with a circle cut out of it. So that circle needs to be subtracted.



volume
of the
area of

Add together the surface area of the cylinder to the surface area of the prism, and subtract TWO circles.

7. Find the capacity of a 3d shape in #1. (Find the volume, then convert to ml or litres.) (vol p. 17-19)
Remember : $1 \text{ cm}^3 = 1 \text{ ml}$; $1000 \text{ ml} = 1 \text{ litre}$; $1000 \text{ cm}^3 = 1 \text{ litre}$; $1 \text{ m}^3 = 1 \text{ kilolitre}$; $1 \text{ litre} = 1000 \text{ ml}$.

